

Soils Handling and Disposal Plan & Worker Health and Safety Plan

Owner: Daniels Real Estate

Environmental Consultant: Landau Associates

General Contractor: JTM Construction

Project: Stadium Place West (North Lot)

Site Address:

201 King St.

Seattle, WA 98101

THIS PLAN SHALL BE UPDATED AS NECESSARY TO REFLECT
ACTUAL SITE CONDITIONS AND PRACTICES
AND IT WILL BE UPDATED PERIODICALLY AS MAY BE REQUIRED

A COMPLETE, UPDATED COPY OF THIS PLAN MUST BE ACCESSIBLE
ON THE PROJECT SITE AT ALL TIMES

DRAFT

May 18, 2011

PROJECT and SITE INFORMATION

Earthwork Scope of Work for this project includes the following:

- Excavation
- Grading
- Select demolition of existing asphalt
- Installation of underground utilities
- Import and export of material (trucking)
- Traffic Control during trucking operations

Project Site Address

201 South King St. Seattle, WA 98101

SOILS HANDLING and DISPOSAL PLAN

Introduction

The purpose of this Soils Handling and Disposal Plan is to prevent or reduce the potential discharge of pollutants to stormwater or intermixing of contaminated soils with adjacent soils by conducting pre-construction investigations and surveys, inspecting excavations regularly, and remediating contaminated soils properly and promptly. All known and reasonable best management practices (BMP's), safety procedures and applicable rules and regulations will be adhered at all times on this Project when handling and disposing of contaminated materials.

Identified Project Contaminated Soils

Reference the Landau Associates "Ecology Review Draft Clean Up Action Plan" dated March 25, 2011 for a background information on the development project, investigations and surveys completed to date, and planned cleanup actions.

Soil Handling – Education and Oversight

- Employees, subcontractors or others who may be involved in handling contaminated soils will be 40 hour hazardous material trained prior to performing any contaminated soils handling.
- Landau Associates (Environmental Consultant) will have an onsite field representative observing and ensuring that all soil handling is completed in accordance with applicable project codes, rules and/or regulations and the approved Cleanup Action Plan.

- Regular onsite meetings will be conducted to ensure soil handling procedures meets all applicable requirements. Required attendees will be the property Owner, Owner’s Environmental Consultant, General Contractor and soil handling subcontractor representatives.

Soil Handling – Procedures

- Soil testing has previously occurred to determine expected areas of contaminates. These materials are planned to be excavated directly into trucks and hauled to the approved disposal facility.
- Environmental consultant will perform in place testing of soils to determine the extent of existing contaminated materials. To the greatest extent possible, contaminated materials will be excavated and placed directly into trucks and hauled to the approved disposal facility to minimize the need for stockpiling contaminated soils onsite before disposal.
- Onsite storage of contaminated soils will be minimized.
- If temporary stockpiling of contaminated soils is required the stockpiles will be placed on visqueen or tarps and covered with visqueen or tarps; berms will be installed around the stockpile to prevent runoff from leaving the stockpile area; stockpiles will not be placed near storm drain inlets.
- Stockpiled soils will be tested by the Environmental Consultant and as based on the test results the soils will be disposed of at the appropriate approved disposal facility.
- Remove contaminated soils from any vehicle or piece of equipment that may come in contact with the contaminated soils before the equipment leaves the contaminated soils zone(s).
- Air quality will be monitored during contaminated soil excavation operations.
- Procure all applicable permits and licenses and registrations for vehicles carrying contaminated soils.
- Have a SWPPP Permit and Plan onsite prior to the start of earthwork activities. Reference the Stadium Place West SWPPP Plan for project specific stormwater pollution prevention measures.
- Collect ground water and surface rain water onsite into Baker Tanks (or equal), test stormwater water and dispose of it in an approved manner via a Seattle Public Utilities Discharge Permit. Environmental Consultant will test and determine if water treatment is required prior to discharge from the site.
- Collect non-reusable/disposable protective equipment or materials at the completion of the soil remediation and dispose of items at an appropriate disposal site.
- Install temporary security fence around the site and flag/cone off the area of contaminated soils until the contaminants are removed.
- Excavate, transport and dispose of contaminated soils in accordance with all applicable agency rules and regulations. Reference the Landau Clean Up Action Plan for a listed of agencies.

Storm Water Control

- Reference SWPPP dated May 6, 2011 for project specific stormwater management measures and procedures.
- General Contractor and Earthwork Subcontractor will jointly manage and implement the SWPPP.

Inspection and Maintenance

- Environmental Consultant, General Contractor and Earthwork Subcontractor (Project team) will regularly inspect and verify that all required BMP's are installed prior to commencement of work.
- Throughout the contaminated soils handling, the Project Team, will regularly inspect the project to ensure that BMP's are maintained and that all required contaminated soils handling procedures are strictly adhered to.
- Monitor air quality during excavations operations and report any air quality issues immediately.
- Coordinate contaminated soils and hazardous substances disposal with the approved disposal form and appropriate federal, state and local agencies.
- Implement Spill Prevention, Control, and Countermeasures Plan (SPCC) when required.

Soils Disposal and Documentation

- Class II and Class III contaminated soils will be disposed of at TBD_____ in accordance with all applicable laws, rules and regulations.

WORKER SAFETY and HEALTH

Introduction

The purpose of this Worker Safety and Health Plan is to prevent work related injuries and illnesses due to any work in and/or around known and/or unknown contaminated soils or hazardous substances that may be encountered onsite related to contaminated soils handling.

In addition to this Plan, also reference General Contractor and Earthwork Subcontractor “Site Specific Safety Plans” for safety plan policies, procedures, reporting forms and safety resources.

Educate Workers and Define Limits of Contaminated Soils Excavations

- Prior to working onsite, workers will be informed as to the fact that contaminated soils are located onsite and where they are located.
- Workers who will potentially come in close proximity to or in contact with contaminated soils will be educated as to the safety risks and precautions to be taken when working in these areas.
- To minimize possible exposure to contaminated soils, work areas containing impacted and /or contaminated soils will be identified as “Hot Zones” and flagged off or otherwise clearly identified onsite.
- All work performed in the Hot Zone that involves the disturbance and/or excavation of soil will be done by workers who meet the training requirements contained in this Work Plan.
- All work performed in Hot Zones and/or Caution Zones that involves the disturbance or excavation of soil, must be performed under the direct supervision of a HAZWOPER trained Supervisor.
- Moreover, every worker who will work in either Hot Zones or Caution Zones must complete the training as described in this Work Plan.
- It is the classification of the work areas by Zones combined with the graduated levels of worker training that creates the effective and efficient procedures necessary to work safely at project jobsite.
- Areas with impacted soils (Hot Zones) may be re-classified by the Environmental Consultant or onsite HAZWOPER Supervisor as a Caution Zone once it is determined that employees are not exposed to concentrations of contaminants at or above the permissible exposure limits.
- In conjunction with the requirements based in this work plan, all subcontractors onsite performing activities where employees may be exposed to the contaminants will also required to submit their own site-specific Health and Safety Plan prior to the start of work on the jobsite.
- Subcontractors must also train their employees on the requirements of their plan.

Emergency Contact Information and Site Supervision Contacts

- To Be Developed prior to start of contaminated soils handling

Site Hazard Evaluation

Prior to the disturbance of Hot Zone or Caution Zone soils, the Environmental Consultant and a HAZWOPER Supervisor, in conjunction with General Contractor personnel, will perform an evaluation of the area. This evaluation will include a visual inspection of the soils in the area to be excavated or disturbed, installation of barriers designating the area as limited access, installation of appropriate Zone barrier tape. Caution Zones will either be delineated with yellow caution tape or verbally discussed with the jobsite. Note that Hot Zones will always be identified by red barrier tape.

Hazard Communication & Work Practices

Hazard Communication

- All personnel working in or around contaminated soils will be required to attend and successfully complete the Project's Site Specific orientation before working on site. Awareness Training including a discussion on impacted soil on site will also be conducted at this time.
- Workers working in and/or around contaminated soils must have completed training meeting the requirements of a WISHA "40-Hour HazMat Course" and certification must be current.
- Weekly safety meetings will be conducted by the General Contractor and/or Earthwork Subcontractor. All workers working in and/or around the contaminated soils will attend this meeting.
- All employees need to realize that they have a responsibility to themselves and others to use good judgment when working in all areas at the Site.
- Any areas where employees suspect contamination (smell, stained soils, etc.), it is important that the area is immediately vacated and the employee's supervisor informed so that testing can take place.
- Prior to starting excavation work at the **Northwest** portion of the jobsite the area will be coned and flagged off with red barrier tape and signed to clearly identify the area a hazardous material area. This area will be considered a hot zone until air monitoring data and soil testing data proves that no significant health hazards exist in the area.
- If other potentially impacted or contaminated soils are discovered onsite, work shall cease in this area and the Environmental Consultant, General Contractor and Earthwork Subcontractor shall be immediately notified.

Personal Responsibility to Inform

Any worker, who suspects an area may be impacted or contaminated, must immediately notify the supervisor, or the General Contractor supervisor. Upon such notice, appropriate testing will be performed by the Environmental Consultant. Employees will not be permitted to re-enter the work area in question until the testing has been completed and the Environmental Consultant or HAZWOPER Supervisor has determined the appropriate work practices and personal protective equipment to be utilized.

Hot Zone Work (NW Corner of the Project Site) - Practices and Procedures

- The Hot Zone area of this project (Zone 1 – Northwest Corner of the Site) contains impacted soils and may contain contaminated soil.
- All personnel entering a Hot Zone will have received Site Specific Awareness Training as described in this Work Plan.
- Employees, whose work will involve the excavation or disturbance of soils within the Hot Zone, must have also successfully completed 40-hour Hazardous Worker (“HAZWOPER”) training.
- A HAZWOPER Supervisor will be on Site at all times during the excavation or disturbance of soils in a Hot Zone.
- All employers involved in excavation or disturbance of soils will be required to have a HAZWOPER Supervisor.
- Employees, who cannot prove that he/she is authorized to enter a Hot Zone or does not have the appropriate PPE, will not be allowed to enter Hot Zone.
- Unauthorized persons entering into a Hot Zone are subject to disciplinary action and/or removal from the jobsite.
- Eating, drinking, smoking, chewing gum or tobacco is prohibited in Hot Zones. Consumable items and activities shall be confined to designated Worker Break Areas.

Caution Zone Work (All Other Areas Onsite) - Practices and Procedures

- In the Caution Zone, contaminants may exist. All personnel entering a Caution Zone must have received Site Specific Awareness Training as described in this Site Work Plan.
- A HAZWOPER Supervisor, provided by the Earthwork Subcontractor, will be required to be on site at all times during the excavation or disturbance of soils in the Caution Zone area(s).

Engineering Controls

- The implementation of Engineering Controls is the responsibility of the Earthwork Subcontractor.
- During excavation of “dry” soils wetting will be required to minimize dust. Over wetting is to be avoided to prevent excess water runoff.
- All tools and equipment are to be cleaned and decontaminated on site prior to their removal from the “Hot Zone” areas.
- “Hot Zone” areas will be signed and isolated with barrier tape/signs, cones etc. to prohibit entry of untrained personnel.
- Additional engineering controls will be utilized as deemed necessary by the Environmental Consultant and/or Earthwork Subcontractor HAZWOPER Supervisor.

Personal Protective Equipment

1. Minimum Requirements

Appropriate Personal Protective Equipment (PPE) shall be worn by all individuals on the jobsite. Minimum PPE for this jobsite consists of:

- Suitable work boots
- Highly visible vest
- Hard hats
- Eye protection

Additionally, personal protective equipment to be utilized by the onsite personnel will be determined based upon the Environmental Assessments, by the Environmental Consultant, Earthwork Subcontractor HAZWOPER Supervisor, Site Specific Work Plan, Employee’s exposure assessments, air monitoring, and/or soil testing.

Employees who are working in areas identified as Hot Zones and who are directly involved with the disturbance of contaminated soil, must wear, at a minimum, the following PPE:

- Protective eyewear
- Protective Outerwear
- Outer gloves
- Chemically resistant boots.
- Highly Visible Vest
- Hard hats.
- Respiratory Protection (as necessary)

When employee exposure monitoring results indicate that airborne hazardous material concentrations are low in a designated Hot Zone, the zone may be re-classified, or when employees are working in a caution zone, the following PPE should be worn at a minimum:

- Protective eyewear
- Outer gloves
- Suitable work boots
- Highly visible vest
- Hard hats

2. Training

Hot Zone Training

All personnel entering a Hot Zone must have successfully completed a 40-hour HAZWOPER training course conducted by a qualified training provider before they engage in the work activities that may disturb the Hot Zone soils. A HAZWOPER Supervisor must also be onsite at all times when the soil is being disturbed. The 40-hour trained workers will also attend a Site Specific Training meeting the requirements of WAC 296.62. This Hot Zone Awareness Training will include the following information:

- The elements of the Site Specific Safety Plan
- Names of personnel and alternates responsible for Site safety and health
- Safety, health and other hazards present on the Site. This section will include training on the contaminants found onsite.
- Characteristics and locations of suspected contaminants
- Appropriate handling of suspected contaminants
- Procedures for transport and disposal of suspected contaminants
- Hazards and medical effects of contaminants identified at the Site
- Medical surveillance requirements, including recognition of symptoms and signs that might indicate overexposure to hazards
- Types, frequency, and interpretation of the air monitoring data that will be conducted during the Site work
- Personal protective equipment (“PPE”) to be utilized by all personnel during work in the Hot Zone
- Proper care and donning of PPE
- Limitations of PPE
- Requirements of personal decontamination procedures
- Appropriate work practices to minimize health and safety risks
- Site control measures

- Barrier identification and controls
- Safe use of engineering controls and equipment on the Site
- Emergency response plan
- Applicable sections of WAC 296-62 and 296-155

Caution Zone Work

- All personnel entering a Caution Zone must have attended Site Specific Awareness Training before they enter a Caution Zone.
- This Caution Zone awareness training will include the following minimum information:
 - a. The elements of the Site Specific Safety Plan
 - b. Names of personnel and alternates responsible for Site safety and health
 - c. Safety, health and other hazards present on the Site

 - d. Characteristics and locations of suspected contaminants
 - e. Hazards and medical effects of contaminants identified at the Site
 - f. Types, frequency, and interpretation of the air monitoring data that will be conducted during the Site work
 - g. Personal protective equipment (“PPE”) to be utilized by all personnel during work in the Caution Zone
 - h. Proper care and donning of PPE
 - i. Limitations of PPE
 - j. Requirements of personal decontamination procedures
 - k. Appropriate work practices to minimize health and safety risks
 - l. Site control measures
 - m. Barrier identification and controls
 - n. Safe use of engineering controls and equipment on the Site
 - o. Emergency response plan
 - p. Applicable sections of WAC 296-155

Medical Surveillance

Employers will comply with Washington State’s (WAC 296-843-210) requirements for employees who will be involved in the disturbance of soils in Hot Zones. A medical surveillance plan will be developed for all employees who meet any of the following:

- Are or may be exposed to hazardous substances or health hazards for at least 30 days a year, at or above the permissible exposure limits (PELs) or other published exposure levels
- Wear a respirator for at least 30 days a year are injured, become ill, or develop signs or symptoms of possible overexposure to hazardous substances or health hazards
- Are hazardous materials team (HAZMAT) members.

Medical examination will include the following information for each affected employee.

- A medical and work history, with special emphasis on symptoms related to handling hazardous substances and health hazards Information about fitness for duty including the ability to wear any personal protective equipment (PPE) under conditions that may be expected at the workplace.
- Any additional information that is determined by the examining physician.
Earthwork Subcontractor will be providing this program at their own expense.

Air Monitoring

- Air monitoring shall be conducted by the Environmental Consultant and/or Earthwork Subcontractor HAZWOPER Supervisor to identify and quantify airborne levels of hazardous substances and to document exposure levels within the Hot and Caution Zones during the excavation or disturbance of soils. This information will be utilized to determine the effectiveness of engineering controls and work practices. Results of air monitoring will be submitted to **JTM Construction**. Any exposure results above the action level will be noted and corrective action taken prior to next work shift.
- To minimize possible exposure, excavation work areas will be considered “Hot Zones” until air-monitoring results prove below PEL or Sufficient Historic data can be provided to insure anticipated exposure will be below action level / PEL. (To comply with WAC 296-843-130)

- All employers are directly and completely responsible for protecting their employees. Employees most likely to experience the highest potential exposure to hazardous substances and health hazards shall be monitored by their HAZWOPER Supervisor during all excavating and soil disturbance of contaminated soil. Employers are also responsible for providing all necessary monitoring and service of their equipment.

Personal Exposure Monitoring

- Personal exposure monitoring will be performed for the previously identified contaminants using a low-volume air collection device in accordance with OSHA and WISHA procedures.
- This monitoring is the responsibility of each individual employer. The exposure monitoring results will be available for review by the monitored worker.

Ambient Air Monitoring

- Air Monitoring shall be conducted for the purposes of establishing baseline concentrations. This baseline will be used to evaluate abatement success.
- Monitoring shall be conducted by the Environmental Consultant or a third party consultant.
- If perimeter concentrations reach or exceed 50% of the applicable Action Level, the HAZWOPER Supervisor shall review the work practices, and recommend work practice modifications where appropriate to reduce perimeter concentrations.

Wash Stations/Decontaminations Stations

- A Hand wash station will be provided by the Earthwork Subcontractor.
- It is strongly suggested that all employees use these facilities prior to breaks, end of the shift, prior to eating, drinking, chewing gum or use of tobacco products and prior to entry of Designated Worker Break Areas, or in the event of inadvertent skin contact with contaminants.
- The decontamination of tools and equipment must start in the hot zone and end in the decontamination zone.
- Wash stations must be placed at the far end of the decontamination zone.
- Employers must provide a detailed description of their decontamination procedures and are required to provide their employees with decontamination stations/units.

Designated Worker Break Areas

Eating, drinking, gum chewing, and tobacco are not permitted in Hot and Caution Zones. Such items and activities shall be confined to designated Worker Break Areas. Employers are responsible for establishing these areas for their employees.

Stockpiling of Material

If stockpiles of materials are used, they will be characterized by Landau Associates or other a Third Party. Earthwork Subcontractor will ensure that each pile of material is properly secured by plastic tarps, berms, and signage.